



SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	HYDROCHLORIC ACID (1.0N/M)
Other identification (Chemical name, Commercial name, Synonymous)	ACIDE CHLORHYDRIQUE, HYDROCHLORIC ACID, ACIDE MURIATIQUE, MURIATIC ACID
Product code	CS-0010
Chemical formula	HCl
Molar weight	36.46
Recommended use and Restrictions on use	For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.
Supplier	LABORATOIRE MAT 610, rue Adanac Québec G1C 7B7 418-660-8666 Mon-Fri 8h-16h www.labmat.com labmat@labmat.com
Emergency phone	418-660-8666 Mon-Fri 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS	2025-02-06

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA

- Skin corrosion/irritation - Skin corrosion - category 1
- Serious eye damage/eye irritation - Eye irritation - category 1
- Corrosive to metals - category 1

PICTOGRAMS



Signal Word

DANGER

Hazards statements (H)

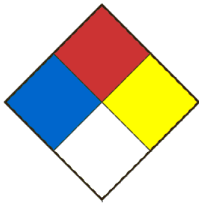
- Causes severe skin burns and eye damage
- Causes serious eye damage
- May be corrosive to metals

Precautionary statements (P)

- Do not breathe mists, gases, vapors and other fumes, or the product itself.
- Wear protective gloves (nitrile, butyle, neoprene), protective clothing and eye and face protection.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse with water.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- Immediately call a POISON CENTER or a physician.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Store locked up.
- Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
- Keep only in original container.
- Absorb spillage to prevent material damage.
- Store in a corrosion resistant container or a container with corrosion resistant liner.

Other dangers

NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)



Health 2
Fire 0
Reactivity 0
Special danger

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
Hydrochloric acid	7647-01-0	3.6

SECTION 04 - FIRST AID MEASURE

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation persists, seek medical attention.
Inhalation	Consult a physician. Move the unwell person to the fresh air. If breathing is difficult, give oxygen.
Ingestion	If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	The product is a corrosive material. Main symptoms of high exposure: Chemical burns of the skin, eyes and respiratory and digestive mucous membranes. The corrosive effect will outweigh the toxicity for the concentrated product. Ref. section 11.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician.

SECTION 05 - FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Not applicable.
Combustion products	Hazardous combustion products formed under fire conditions: Gaseous Hydrogen Chloride.
Specific hazards of the dangerous product	When concentrated, the product reacts according to the following characteristics: May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency measures	Evacuate personnel to safe areas. When handling, wear appropriate safety equipment. Ensure a good ventilation. Use NIOSH cartridge respiratory protection for larger spills. (Reference Section 8 for protective equipment to be used.) Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Dispose of residues in a container for disposal of hazardous materials. Discharge into the environment must be avoided.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Hygroscopique Store in a cool and dry place. Keep container tightly closed in a dry, well-ventilated place. Keep container tightly closed and store away from heat, moisture, and incompatible products (ref. section 10). Protect from light and sunlight. Do not store in metal containers.
Methods of handling	Avoid ingestion and inhalation. Avoid contact withh eyes, skin and clothing. Bottle in the glass only. NOTE: may attack some plastics, rubbers and coatings. Wear personal protective equipment (ref. section 8) when handling. Always ensure good ventilation. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

WORKPLACE CONTROL PARAMETERS

Components	CAS-No.	Control parameters	Value	Basis
Hydrochloric acid	7647-01-0	(c)	2 ppm 3 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		C	2 ppm	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	A substance which may not be recirculated in accordance with section 108			
		(c)	2 ppm	Canada. Ontario Reg.833
		C	2 ppm	Canada. British Columbia OEL
		C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data origin	CNESST Worksafecb.com Ontario Regulation 833. ACGIH Alberta OELs. Sigma-Aldrich (Millipore Sigma)
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Gloves resistant to acidic corrosive materials. Suggested material: Nitrile. Butyl. Neoprene. The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothes	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Use fan. Recirculation is prohibited. Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color	Colorless
Odour	Suffocating smell
Odour threshold	Data not available
Melting point and freezing point	Data not available
Boiling point	Data not available
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Flash point	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
pH	1.1
Kinematic viscosity	Data not available
Solubility	Miscible with water in all proportions
Partition coefficient water/n-octanol	Data not available
Vapour pressure	Data not available
Relative density	1.02
Vapour density	Data not available
Particle characteristics	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Acid product, reacts strongly with strong bases. May react violently with incompatible substances. Reacts strongly with metals.
Chemical stability	Stable under recommended storage conditions. Sensitive to heat. Air sensitive.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions to avoid	Avoid contact with incompatible materials and extreme temperatures.
Incompatible materials	When pure, the product reacts with the following products: Bases. Fluorine. Amines. Metals. Metal acetylides. Lithium silicide. Alkali metals. Permanganates. Oxydants.
Hazardous decomposition products	Gaseous Hydrogen Chloride.

SECTION 11 - TOXICOLOGICAL INFORMATION

HYDROCHLORIC ACID (1.0N/M)

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.
- Eyes	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Skin	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
- Inhalation	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Acute toxicity (Ingestion)	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.
Chronic exposure effects / symptoms	To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

HYDROCHLORIC ACID 36.5-38%

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	The corrosive effect will outweigh the toxicity for the concentrated product. By exposure route below.
- Eyes	Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	Severe burns and tissue ulcerations. Perhaps fatal, if the extent of the burns is considerable.
- Inhalation	Spasms Irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis. Pulmonary edema. Can lead to death.
Acute toxicity (Ingestion)	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall. Dysphagia. Abdominal pain. Cramps. Diarrhea. Melena. Hematemesis. Possible perforation of the esophagus and stomach. Sweating, Salivation.
Chronic exposure effects / symptoms	Burning sensation. Dermatitis. Conjunctivitis. Photophobia. Lung damage. Eye damage. Chest pain. Dental enamel abrasion. Cough. Dyspnoea. Laryngitis. Tracheobronchitis. Headache. Dizziness. Fever. Sweating. Salivation. Thirst.
DL50 (specify species and route of entry)	LD50 Oral - Rat - 700mg/kg. LD50 Dermal - Rabbit - > 5 010 mg/kg.
CL50 (specify species and route of entry)	LC50 Inhalation - Rat - 1 h - 3124 ppm

SUMMARY

ETA Mix (Estimated Acute Toxicity)	LD50: >5000 mg/kg -Oral Rat
	LD50: >10000 mg/kg Dermal - Mouse
	LC50: 44000 ppm 4 hr- Inhalation Rat

SECTION 12 - ECOLOGICAL INFORMATION

HYDROCHLORIC ACID (1.0N/M)

Ecotoxicity	Data not available.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to the environment.

HYDROCHLORIC ACID 36.5-38%

Ecotoxicity	Hydrochloric acid: Toxicity to fish: LC50 - Lepomis macrochirus - 24.6 mg/L -96h. Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea): 4.91mg/L - 48h.
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to the environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Neutralize with low sodium hydroxide solution by slowly adding hydrochloric acid to avoid sudden temperature rise and vapor emission. Neutralization can cause the formation of heat or vapors that must be controlled by the rate at which solutions are added. The solution thus neutralized can be disposed as a household waste. For large quantities, contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	1789
UN Proper shipping name	ACIDE CHLORHYDRIQUE
Transport hazard class(es)	Matières corrosives
Packing group	III
Limited quantity index	5 L
ERAP Index	.
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA

- Skin corrosion/irritation - Skin corrosion - category 1
- Serious eye damage/eye irritation - Eye irritation - category 1
- Corrosive to metals - category 1

SECTION 16 - OTHER INFORMATION

CNESST: Commission des normes, de l'équité et de la santé et sécurité au travail

NIH: National institute of health (U.S. National Library of Medicine)

ECHA: Agence Européenne de Chimie

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

VECD: Valeur d'exposition courte durée

VEMP: Valeur d'exposition moyenne pondérée

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TLV : Threshold limit value

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

RSST: Règlement sur la santé et sécurité au travail (Québec)

INRS: l'Institut national de recherche et de sécurité pour la prévention des accidents du travail et des maladies professionnelles (France)

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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